

# LOOKING AHEAD

A monthly report to members of the National Planning Association on forward-looking planning and research — announced, underway, and completed — of important significance to the nation's future

Experimental Issue

December, 1952

## THE WHY AND HOW OF LOOKING AHEAD

by H. Christian Sonne

With this issue of Looking Ahead the National Planning Association embarks on an experiment. Here we offer to our members and friends information which they might find useful in their own efforts to look ahead and plan. Whether or not we continue this experiment will depend on the response of these members and friends. If we do continue Looking Ahead, we must rely on them to help shape it into a useful tool for all.

"Looking ahead" is a phase in human action; it is an essential phase in intelligent human action. The farmer who plows and sows; the businessman who embarks on a productive venture; the worker who takes a job; the consumer who decides whether to buy or save; the government which builds a dam or adopts or removes a tax measure—all are guided by anticipations of the results of their actions. Whether their expectations will be realized or not depends to a large extent on the accuracy of their appraisal of future conditions: the future weather, the future market, political developments—in brief, upon all of the factors beyond their control that condition the results of their actions.

Many efforts have been made in recent years to supply forecasts concerning the weather, economic conditions, what Congress is likely to do, or what Stalin is likely to do. These forecasts range all the way from bulky, statistical volumes to the "dope sheets" of the investment counselor. We do not intend to add another service of a type already in existence. We will not offer any forecasts, economic or otherwise, in this journal.

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### We Want Your Help

The kind of service aimed at in Looking Ahead is described by Mr. Sonne in this issue. The NPA staff, to be responsible for putting the report together, feels that success in achieving those aims will rest on our ability to find significant information which is not readily available.

We need your help in making this a highly selective and condensed job of reporting, keyed to the practical needs of NPA members.

After looking over this trial issue, will you:

1. Give us your frank reaction to it.
2. Tell us what kind of information you would find most useful in your work.
3. Send us items for future use.



We will report on fresh thinking and new approaches in attempts to explore the future as a perspective for the present. We will report mainly on what others are doing, but will not overlook NPA's own activities.

Specifically, we plan to report on:

1. Information about and appraisals of significant findings presented by private research and educational groups, civic organizations, business concerns and government agencies, which are of relevance for longer-range thinking and programming.
2. Methods and sources for forecasting which might not otherwise come to the attention of our readers.
3. Pertinent literature, conferences, and other activities which are related to forward planning.

Let me, in initiating a new venture in these fields, add a more general word about what we mean by "looking ahead." There are, I believe, two different concepts, both of them important. When, as a businessman, I have to make a decision concerning my inventory policy, I must have a judgment about future market developments, or at least, I must be aware of conditions which might make the market move either way. In any case, I regard the market and all factors, including domestic and international politics, that shape it as given conditions beyond my control and I must adjust my actions to it. For this purpose no "if" statement is of any value to me — because I cannot take any "iffy" action. Action, and also inaction, is usually definite, seldom reversible.

If, however, we are concerned, not with the individual's business decision, but with the course of business development as a whole, we have need of another type of forecast.

This type of forecast may, for example, point to the danger of a recession which we see threatening if present private or public policies are continued. The pur-

pose in pointing out such dangers is to help agriculture, business, labor, and government to take action that might mitigate or avoid that danger. During discussion of the Employment Act of 1946, the opinion was expressed by some that no authoritative agency would ever dare to give a candid opinion of the business outlook because, by pointing to unfavorable trends, it might hasten an unfavorable development; and, by pointing to favorable developments, it might accelerate a boom. So it was believed that the publication of official reports on the economic outlook might institute a "Pollyanna" attitude in economic reporting. I have always felt that those who expressed this fear must have a rather low opinion of the intelligence of people in business and government. I believe that candid recognition of what lies ahead, is a prerequisite for adoption of public and private policies needed to mitigate or to avoid dangers. The recession "forecast" accomplishes its best purpose if it helps to keep the forecast from coming true.

In launching Looking Ahead, I believe that I can speak for the National Planning Association when I say that in our opinion farsighted action by our people and by our government gives us a better chance to avoid a planned economy. It is in this sense that I am proud to have the opportunity of helping to launch our new venture — Looking Ahead.

## Significant Activities

### Help for the Scientists

Finding ways to keep up with the mass of new information in scientific journals is a job which constantly haunts scientists. The problem has been eased by a new filing system set up in the Chemical-Biological Coordination Center, of the National Research Council in Washington, where 17 scientists each month go through 40 technical publications searching for information on the biological effects of chemicals. Already the data obtained — concerning 50,000 chemicals — has been placed on 750,000 punch cards. Machines equipped to sort through 100,000 cards an hour pick out all the pertinent bits of

knowledge, so the CBCC is in position to give rapid answers to questions asked by scientists.

(Full details from Dr. Karl Heumann, CBCC, 1785 Mass. Ave., N. W., Washington, D. C.)

#### **U. S. Imports and Foreign Aid**

What would happen to American imports if tariffs and quotas were abolished is now being studied by Howard S. Piquet, Senior Specialist in International Economics, Legislative Reference Service, Library of Congress.

This study is aimed at bridging the gap between the larger considerations which affect U.S. foreign policy-making and the more specific factors which businessmen must have in mind when they think about the problems of possible competition from foreign products. Estimates will be made of the extent of the impact which each commodity would have on the American market if it could be freely imported and the possibilities of making the kinds of adjustments which might be needed to absorb these impacts.

On the basis of the extensive research work which Dr. Piquet has done for a number of congressional committees, the report will project the probable increases in our 1951 imports of 220 individual commodity groups — representing approximately 80% of our dutiable imports in 1951 — if tariffs and quotas were to be suspended. Dr. Piquet will also estimate the increased dollar earnings, based on the 1951 trade pattern of countries now receiving U.S. aid, and the extent to which world trade could replace aid.

(Scheduled for publication, early 1953, by Thomas Y. Crowell Co., New York City.)

#### **Foreign Economic Policy—Reappraised**

Since World War II, there have been many foreign economic policy studies made by special Government committees and by private groups. However, these usually have been concerned with short-term adjustments in policies and programs or with problems of administration.

A new approach is taken by the Joint Study Group, set up in November by the Woodrow Wilson Foundation and NPA. The aim of the eight-man study group will be to re-examine our basic concepts about the nature of the contemporary world economy, the extent to which they reflect realities of the situation, and the adjustments in policies and programs which would be necessary if our concepts and assumptions were made more relevant to current and prospective world conditions. This long-range study will not be concerned with administrative problems.

(Further details from WWF, 45 E. 65 St., New York 21, or NPA. Scheduled for completion, late 1953.)

#### **Outlook Forum**

The first NPA "Looking Ahead" Forum was held in New York Nov. 24, when businessmen from New York City and 14 eastern states participated in discussions of "The Economic Outlook for 1960." NPA participants were Gerhard Colm on "Background for the Future," Elmo Roper on "General Business Outlook," Clinton S. Golden and Donald R. Murphy on the outlook for labor and agriculture, respectively, and Beardsley Ruml on "Tax and Fiscal Outlook." Robert C. Tait and William L. Batt were dinner speakers.

The private Forum was experimental, designed to introduce to nonmembers of NPA the joint agriculture-business-labor planning approach and to gain the benefit of their suggestions. Future meetings may be held in other cities — possibly Pittsburgh in January.

#### **Foundation Reports**

The Rockefeller Foundation, in Nov., issued its 1951 Annual Report which contains also a review of 1950. Grants for the two years were \$9 million-plus and \$19 million-plus. Major increases in 1951 were in social sciences, natural sciences and agriculture, and general education. NPA members may write for free copy of 560-page illustrated book:

(Publ. Office, Rockefeller Foundation, 49 West 49 St., New York City.)

## Statistically Speaking

### Population Trend and Family Formation

Nowadays population forecasts are made with much less conviction than they used to be, in view of the fact that previous forecasts have been so far off the mark. Many more babies have been born in the postwar period than were scheduled in any past forecast, and they keep right on coming. Now the question is: Will birth rates continue indefinitely at the high levels of recent years, will they soon fall back to what might be considered "normal," or will they drop even further? Using these alternative assumptions, the Census Bureau has developed three "illustrative projections" of the 1960 population — of 180 million, 171 million, and 165 million, respectively. They compare with a 1950 Census count of 151 million.

Projections of total population are important for certain uses, such as estimating future food requirements. Whether there will be an increase of 9% or 19% over the decade in the number of mouths which must be fed makes a big difference in agricultural plans. (These percentages refer to the Census Bureau's "low" and "high" projections.) Fortunately,

however, there are many uses for a population projection which do not depend on the total figure. In many cases it is more essential to know the number of persons who will be in some particular age group. So long as the persons who will compose the group at a given future date have already been born at the time of the projection, their number may be predicted with considerable accuracy.

The tabulation presented here shows by rather broad classes how the age distribution of the 1960 population might compare with that of 1950. These figures are taken from the Census Bureau's medium total population estimate of 171 million. The projected number of children 8 years old and under is subject to a wide margin of error, but for older persons, it is likely that the projections will be close to fact, barring a major change in mortality trends or immigration.

The largest increase among the categories shown will be in the 6-17 group. This group is due to increase by about 11 million, or 40%, in a 10-year period. The postwar bumper baby crop will be in grade school and high school in 1960 and a few years later will flood colleges. To maintain or improve educational standards in the face of such an increase in school enrollment will be a major public task in the present decade.

Age Distribution of United States Population  
1950, Actual; and 1960, Projected  
(in millions)

<u>Age Group</u>	<u>1950</u>	<u>1960</u>	<u>Prospective Increase or Decrease</u>
5 and under.....	18.9	16.4	— 13 %
6 - 17.....	27.9	39.1	+ 40 %
18 - 29.....	28.4	27.7	— 2 %
30 - 59.....	57.7	65.0	+ 13 %
60 and over.....	18.3	23.0	+ 25 %
Total.....	151.1	171.2	+ 13 %

NOTE: 1950 figures are from census taken in April 1950, plus armed forces overseas. 1960 column refers to Census Bureau's "medium" illustrative population projection for July 1, 1960, including armed forces overseas.

Source: Bureau of the Census

The prospective drop in population of ages 18-29 is a result of the lower number of births during the depression years of the 1930's. The rate of family formation during the 1950-60 decade will not be higher, and will probably be lower, than during the past 1940-50 decade. There are implications for residential construction, the furniture industry, etc., which are not revealed by projections of total population.

Combining the 18-29 and 30-59 groups, an increase of about 8% is indicated in that part of the population from which most of the labor force is drawn. If the total population increases more rapidly during the period covered, as it is almost sure to do, increasing productivity per employee will be a necessity merely to maintain the average standard of living.

The more than proportionate increase, which is anticipated in the numbers of the aged, continues a long-term trend. However, society is learning how to cope with the problems it raises through better utilization of the skills of the aged and through increasingly liberal pension arrangements.

Much helpful technical information for those who desire to make population estimates for future years may be found in 2 Census Bureau publications:

"Illustrative Projections of the Population of the United States, 1950 to 1960," Current Population Reports, Series P-25, No. 57, Aug. 10, 1950.

"Provisional Revisions of the Projections of the Total Population of the United States: July 1, 1953 to 1960," Cur. Pop. Reports, Series P-25, No. 58, April 17, 1952.

#### Revision of Consumers' Price Index

Early in 1953, the Bureau of Labor Statistics will complete a major revision of the Consumers' Price Index. It is designed to measure more accurately price changes of items included in the budgets of moderate-income families and to make use of a

more up-to-date system of weighting. January 1953 will be the first month the new index is used.

The revised index will use average prices of 1947-49 as 100. Therefore, the index numbers will read about 115 (on the 1947-49 base) instead of about 190 as at present (on the 1935-39 base). However, for the convenience of the users of the index who have contractual arrangements using the present base of 1935-39=100, BLS will publish the revised "all-items" index on that base during 1953, as well as on the 1947-49 base.

Both the Old Series and the interim Adjusted Index will be discontinued after publication of the indexes for December 1952. Their discontinuance will create certain problems for users, particularly those who have escalator clauses for wages or other contracts based on these indexes. In order to aid such users, BLS has issued a general statement outlining arithmetic procedures for transition to the new index. This statement covers problems raised by changes in the city indexes, as well as the national index. It is available upon request, from the Bureau of Labor Statistics, Washington.

#### Outlook for Raw Materials

The so-called "Paley Report" — the 5-volume Resources for Freedom prepared by the President's Materials Policy Commission and issued last July — is packed with data on the Free World's supplies of and its needs for raw materials, clear statements of our present raw materials problems and those we will have to face in the future, and constructive recommendations for solutions of these problems.

The Paley Report has special significance for our present and future policies. Its findings are being followed up by a private group (reported in this issue), and by the National Security Resources Board of the U. S. Government.

Excerpts from the Report show why:

\*The inevitable has now come to pass. Whereas for many decades the United States economy produced more raw materials than

it consumed and thus had a net outflow of materials to the rest of the world, we seem now to have settled solidly into the position of consuming more materials than we produce."

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US Production and Consumption of Raw Materials, other than Food and Gold, in billions of 1935-39 Dollars

	<u>Production</u>	<u>Consumption</u>	<u>Surplus or Deficit</u>
1900...	3.8	3.3	+15%
1950...	8.6	9.5	- 9%
1975...	12.6 <sup>1</sup>	15.6 <sup>1</sup>	-20%

<sup>1</sup>Possible production and projected demand.

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It is pointed out that, even if the world could achieve lasting peace, the materials problem would not vanish nor necessarily become less severe — for if all nations of the world should achieve the same standard of living as our own, the resulting world needs for materials would increase to six times the present already massive consumption.

Demand for raw materials, not only in the U. S., but also in all of the Free World, is certain to increase tremendously over the next 25 years. Following are some estimates taken from the Report on prospective increases in demand for some selected materials. (The projections do not predict how much of each material will be actually available and consumed.)

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Prospective Increases in Demand  
For Selected Raw Materials  
By 1970-1980 Period

(1950 Consumption Used as a Base)

	<u>U. S.</u>	<u>Other Free World</u>
Tin.....	18%	50%
Copper.....	43%	54%
Iron Ore.....	54%	73%
Petroleum.....	109%	275%
Aluminum.....	291%	415%

## Tools for Planning

### "Input-Output" as a Guide to Policy

Inter-industry economics, or "input-output" analysis, is a major development which has some parallels in the field of economics with the development of atomic energy in the field of physics. Both had their theoretical origins before the war. For both, the U. S. Government supplied the intensive, practical research necessary for transformation into useful tools. In each case, the Government interest was motivated, mainly, by potential wartime applications — atomic energy was developed during World War II as a revolutionary weapon, and "input-output," more recently, as an aid in economic mobilization. Both show great promise for peacetime applications.

"Input-output" analysis is basically a systematic method of relating to each other all of the purchases and sales of the country's many industries — all of which are interdependent. For the first time in the history of economics, it is possible to answer the question: How will a known or expected change in demand in one industry affect every other industry? The answer for each industry is given in terms of required "inputs" of materials and labor and "outputs" of products.

The idea man behind this approach was Wassily Leontief, a Harvard economist, who began constructing crude input-output models in the 1930's. These models were in the form of a grid, or "matrix," whose rows and columns showed the transactions of each industry with each other industry in a given year. The actual transactions were then translated into a table of coefficients, called an inverse, which showed input-output relations which would apply to any levels of production of end items, so long as there was no substantial change in technology.

Because of the tremendous statistical and mathematical labors involved, Leontief consolidated all industries into twenty-one groups of related industries in his

original work. During the war, the Government became interested, and supported more elaborate research on a 96-industry matrix based on 1939 relationships. Then, in 1948, under auspices of the Executive Office of the President, the Government undertook a really ambitious program designed to develop a 450-industry matrix to be based on 1947 data. The practical objective was to develop some method of determining in advance the effects of various levels and patterns of arms production upon various segments of the economy.

As a first step in constructing the 1947 table, myriads of statistical data were assembled. These had to be organized systematically, and with a higher degree of consistency than in any other analytical approach. Then, to prepare the "inverse," high-speed electronic computing machines were used to perform about 8 million computations — which would have required years of work by hundreds of clerks on conventional calculators.

The 1947 inverse has been completed. There is still much work to be done on refinements and improvements (such as taking account of changes in technology since 1947, and estimating the time lag involved in the transmission of various effects throughout the economy). Even so, given a final bill of goods (for instance, desired levels of production of military equipment items and some desired amount of civilian goods), it is possible now to discover the approximate impact of such a program upon all of the varied industries of the country — to anticipate materials shortages, locate industries lacking sufficient capacity to meet requirements — in short, to find out whether the proposed program is feasible or what steps would be needed to make it so.

While the input-output technique has been guided by its mobilization framework, the basic data and the methods can also be used by private business to study future market possibilities and to appraise long-run investment programs. It must be emphasized, however, that the input-output technique can be used for these purposes only within the framework of a general national income-expenditure projection. Once a pro-

jection of future demand for various end products has been established, input-output permits a projection of the changes in materials and productive capacity which will be required. Thus the device will be more useful to industries selling intermediate products to other industries than to industries selling only finished goods to ultimate consumers. The principal merit of the technique is that it gives back in processed form the assumptions that are put into it. It makes possible the translation of forecasts of final demand into forecasts of indirect demand. Of course, it would still be up to any individual firm using the method to estimate what part of an increase in demand in its industry the firm might expect to capture.

The inter-industry study is guided by the Budget Bureau's Office of Statistical Standards in conjunction with the National Security Resources Board and with the Council of Economic Advisers. It is now financed largely by funds supplied by the Air Force. The 1947 input-output table was compiled by the Bureau of Labor Statistics. Other aspects of the program, particularly the estimate of capital requirements for a given output, are prepared by other agencies and by universities and research institutions.

The full 450-industry matrix exists only on punch cards, but a consolidated table with a 50-industry classification has been published in The Review of Economics and Statistics, May 1952 (published by Harvard University); and a 190-industry table is available upon request from the Bureau of the Budget.

## Watch For—

... During World War II several studies were undertaken to explore economic opportunities as they might develop after the end of the war. Among them were the Dept. of Commerce's Markets After the War (1943), distributed in cooperation with the Committee for Economic Development; NPA's National Budgets for Full Employment (preview, 1944; final report, 1945); Twentieth Century Fund's America's Needs and Re-

Sources (1947); Dept. of Labor's Full Employment Patterns, 1950 (1946).

Now again, when the peak of the defense program appears to be in sight, a number of similar studies have been undertaken, by the same organizations. NPA has just published a staff report on The American Economy in 1960 — Economic Progress in a World of Tension. The Department of Commerce has completed a study Markets After the Defense Expansion, which will again be published in cooperation with the CED, by the end of the year. The Twentieth Century Fund is also bringing up to date its report on America's Needs and Resources. Publication is planned for the end of the year 1953. The Labor Department has undertaken the ambitious Input-Output Chart for 1947 (described in this issue).

... Citizen group — Resources for the Future, Inc., which is following up the Paley Report. It will hold a conference on conservation and development of natural resources in Washington in March with "full" cooperation of the White House. More will be reported on this as plans develop, but it is interesting that the conference will call on representatives of the industries that extract, trade in, and use raw mate-

rials as well as the usual people who attend conservation conferences. (Details from RFTF, Inc., at 1625 Eye St., N. W., Washington 6, D. C.)

## NPA At Year's End

The NPA Board of Trustees, joined by several members of each Standing Committee, held its first meeting in NPA's new headquarters on December 8 and 9, 1952. They discussed the State of the Nation; exchanged views on present and emerging problems which might best be studied by NPA; established priorities for NPA's work in 1953. Details will be sent to NPA members in a forthcoming Special Report.

### NPA Reports

A number of NPA members are quick to send us their comments — pro and con — on NPA reports. We would like to have more, especially on the 4 published in Nov. and Dec.:

- ... How Farm People Learn New Methods
- ... Case Study No. 10, in the series on the Causes of Industrial Peace
- ... Staffing the Presidency
- ... The American Economy in 1960

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